

REMARKS

Claims 1-9 are pending in the above identified application. Claim 1 has been amended by way of the present amendment. Reconsideration is respectfully requested.

In the outstanding Office Action, claims 1-4 were rejected under 35 U.S.C. § 103(a) as being anticipated by U.S. Publication No. 2003/0198155 (Go et al); and claims 5-9 were indicated as allowed. Reconsideration is respectfully requested.

Allowable Subject Matter

First, Applicants would like to thank the Examiner for the early indication of allowed subject matter in claims 5-9, as stated in the Advisory Action mailed January 17, 2008.

35 U.S.C. § 103 Claim Rejections

Claims 1-4 were rejected under 35 U.S.C. § 103(a) as being anticipated by Go et al. Reconsideration is respectfully requested.

Claim 1 has been amended to further clarify the invention. In particular, claim 1 has been amended to recite:

detecting during recording at least one unstable signal source of the optical disk drive and generating a detected value, wherein the at least one unstable signal source is selected from a group including at least one of a level of a focusing error signal, a level of a tracking error signal and a frequency of buffer under-run occurrence;

In particular, the language of claim 1 has been amended to emphasize that the detection of *at least one* of the unstable signal sources (i.e., “a focusing error signal, a level of a tracking error signal and a frequency of buffer under-run occurrence”) occurs “during recording” and are “selected from “*at least one of*” a list of items. That is, the claim language has been amended to clarify the invention such that rather than using language indicating items are selected as a part

of a “group,” the items in the amended claim language are merely selected as “at least one of” a list of items. The amendment is made to clarify the use of the term “group” in the claim language which might be misinterpreted to indicate a Markush group, in terms of claim language and thus lead one to certain assumptions about equivalence of the terms in the list of items.

Support for the amendment is provided at least at page 3, paragraph [0008]; and page 8,

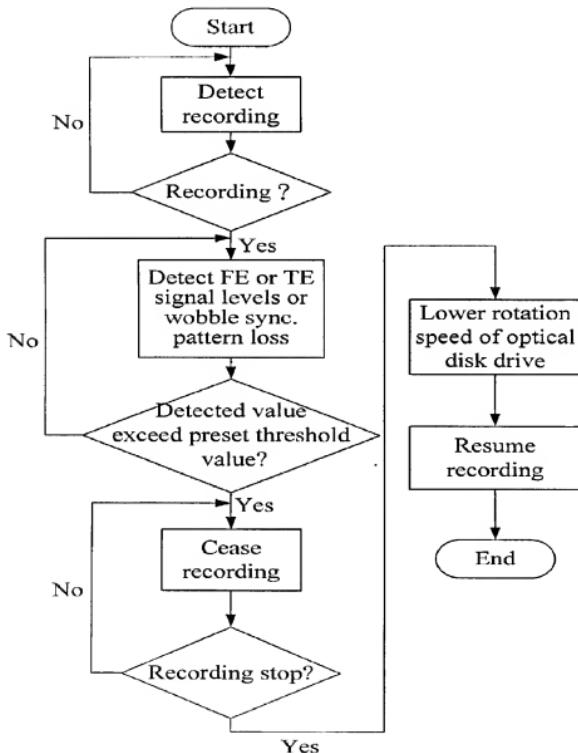


FIG. 2

paragraph [0015], lines 5-6 of the specification; the original claim and at least as shown in FIG. 2 above. Therefore, it is respectfully submitted that the amended claim raises no questions of new matter.

As a result of the above-discussed amendment, Applicants respectfully submit the applied art of Go et al. does not disclose, as claim 1 recites:

detecting during recording at least one unstable signal source of the optical disk drive and generating a detected value, wherein the at least one unstable signal source is selected from at least one of a level of a focusing error signal, a level of a tracking error signal and a frequency of buffer under-run occurrence (emphasis added).

In the section entitled “Response to Arguments,” the outstanding Office Action states:

“[A]ccording to the group of the level of:

**a focusing error (FE) signal,
a tracking error (TE) signal,
a wobble synchronization pattern loss,
an error rate of demodulating a wobble signal, and
a frequency of the buffer under-run occurrence.**

All 5 *different* unstable signal sources as listed above are equivalent for their purpose in representing an unstable recording condition”
(emphasis added).¹

However, it is respectfully submitted that the amendment of the claims to remove the term “group” from the claim language, which might be misinterpreted as giving the above list of items the characteristics of a Markush group, where all members of the group are equivalent, now renders the contention in the outstanding Office Actions that: “all 5 *different* unstable signal sources” are “equivalent” as moot (emphasis added). In fact, the idea that these unstable signal sources are described as “different” in the statement of the outstanding Office Action further indicates that, other than through interpretation as a Markush group as being equivalent,” these unstable signal sources would and should be interpreted as different. Thus, it is respectfully

¹ Outstanding Office Action at paragraph 2, page 3, lines 9-10.

requested that the outstanding rejections be withdrawn since Go et al. does not disclose, suggest or make obvious the claimed invention.

Go et al. discloses an apparatus for changing a recording speed of an optical recording medium by *analyzing wobble signals in real time during a recording operation.* (emphasis added).² However, as discussed above, “wobble signals” are *not* equivalent to the additional unstable signal sources on the list of “at least one unstable signal source,” as claimed in the invention. Moreover, it is respectfully submitted that the contention that the use of the unstable signal sources of the claimed invention was made obvious by the “wobbly signal” taught by Go et al. because they are equivalent is moot since, as discussed above, the signals are *not* equivalent.

Further, Go et al. discloses a control unit **104** includes a state detection unit **104-1**, a comparison unit **104-2**, a memory **104-3**, a recording start/stop control unit **104-4**, and a recording speed control unit **104-5**.³ Further, Go et al., as shown in the flowchart of **FIG. 3** below, discloses: a method of changing a recording speed of an optical recording medium that comprises: *starting an analysis of wobble signals on the optical disc in operation 300*, checking an absolute time in a pregroove (ATIP) state in operation **301**; determining whether a no good (NG) number is equal to or greater than a reference value in operation **302**; stopping *the analysis of the wobble signals in operation 303*; storing time data of a recording stop zone in operation **304**; seeking the recording stop zone and pausing in operation **305**; lowering the recording speed in the recording stop zone in operation **306**; and *restarting the analysis of the wobble signals at the lowered recording speed in operation 307*; determining whether the NG number is equal to or greater than the reference value in operation **308**; and continuously analyzing the wobble signals in operation **309** (emphasis added).⁴

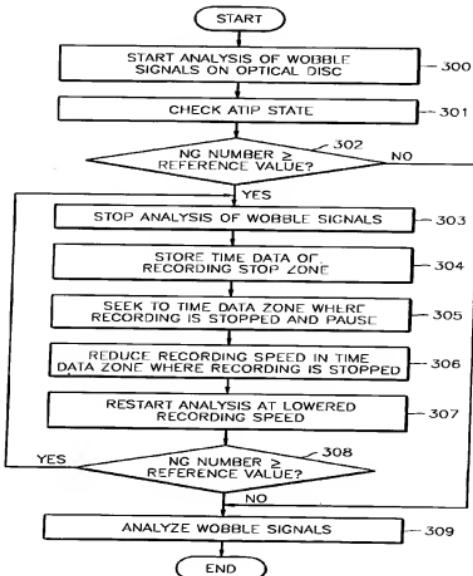
² Go et al., At ABSRACT.

³ *Id.* at **FIG. 2**; and paragraph [0034].

⁴ *Id.* at **FIG. 3**; and paragraph [0035].

As discussed above and as shown in **FIG. 3**, the method of changing a recording speed of an optical recording medium, of Go et al. is determined by analyzing wobble signals (emphasis added).

FIG. 3



Furthermore, the background art section of Go et al. discloses: "the recording speed is determined by measuring a tracking error quality and a focus error quality of a blank disc before a recording operation" (e.g., see Go et al. at paragraph [0012]) (emphasis added).⁵ Thus, in contrast to the claimed invention, Go et al. discloses the tracking error signal and the focus error

⁵ *Id.* at paragraph [0012].

signal are *not* used for determining whether the recording speed should be changed, “during recording,” as recited in the claimed invention.

However, references to the “wobble signal” in the claimed invention were removed by the previous amendment to the claims. That is, references to detecting an “unstable signal” that is related to a “wobble signal” were canceled from the claims. Specifically, the claimed invention is directed toward “detecting during recording” and “wherein the at least one unstable signal source is selected from at least one of a level of a focusing error signal, a level of a tracking error signal and a frequency of buffer under-run occurrence during recording,” as recited in amended independent claim 1.

In addition, with respect to limitation: “a level of a focusing error signal,” the omission of any reference in Go et al. pertaining to this signal in the outstanding Office Action at page 4, paragraph 5, line 7; is a clear indication that that this particular limitation is *not* disclosed by Go et al., “during recording.”

Regarding the limitation of: “a level of a tracking error signal,” the outstanding Office Action suggest that **FIG. 2** and paragraphs **[0020], [0024], [0042] and [0012]** of the Go et al. disclose this limitation. However, as discussed above, the reference to using a tracking error signal in Go et al. occurs “*before* a recording operation” and *not* “during recording, as recited in the claimed invention.

With respect to the limitation of: “a frequency of buffer under-run occurrence,” though Go et al. at paragraph **[0052]** discloses: “buffer under run and defects of read-in start position and seek fail, which are generated during a ZCLV operation, *are prevented*,” it is respectfully submitted that Go et al. nowhere disclose “detecting” during recording “a buffer under-run occurrence,” as recited in the claimed invention (emphasis added). In fact, since Go et al. discloses that the claimed “buffer under-run occurrences” are “prevented,” it is respectfully submitted that this limitation is not explicitly or inherently disclosed by Go et al. since something (i.e., buffer under-run occurrences”) that is “prevented” is clearly *not* available to be “detected,” as the claim limitation requires.

Thus, in consideration of the above-discussion, it is respectfully submitted that Go et al. does not disclose: “detecting during recording” at least one of: “a level of a focusing error signal”; and “a level of a tracking error signal”; and *does not at all* disclose detecting “a frequency of buffer under-run occurrence,” as recited in the claimed invention. Thus, it is respectfully submitted that Go et al. does not disclose the claimed invention and actually teaches away from the claimed invention.

Furthermore, the outstanding Office Action at paragraph 5, page 4, lines 20-22, indicates that Claim 2 is disclosed in **FIG. 3** and paragraph [0035] of Go et al. However, it is respectfully submitted that Go et al. does not disclose the limitations of Claim 2. That is, in accordance with the claimed invention, the step of checking whether the optical disc drive is recording is preferably performed first because the levels of the tracking error signal and the focus error signal are measured “during recording,” as recited in claim 1, upon which claim 2 ultimately depends.

In contrast to claim 2, as disclosed in paragraph [0012] of Go et al., discloses that the tracking error quality and focus error quality are measured *before a recording operation*. Thus, it is not necessary for Go et al to check whether the optical disk drive is recording before detection of the tracking error signal or the focusing error signal. In fact, it is respectfully submitted that based on the above-discussion, Go et al. teaches away from the claimed invention. Thus, it is respectfully submitted, the suggestion in the outstanding Office Action that the disclosed by Go et al. is incorrect.

Thus, in consideration of the discussion above, it is respectfully submitted that Go et al. does *not* disclose the limitation of: “detecting at least one unstable signal source of the optical drive, wherein the at least one unstable signal source is selected from a group including a level of a focusing error signal, a level of a tracking error signal and a frequency of buffer under-run occurrence during recording,” as recited in amended independent claim 1. Therefore, it is respectfully submitted that Go et al. does not disclose, suggest or make obvious the claimed

invention and that independent claim 1, and claims dependent thereon, patentably distinguish thereover and it is respectfully requested that the outstanding rejection be withdrawn.

Conclusion

In view of the above, consideration and allowance of all of the claims is respectfully solicited.

In the event the Examiner believes an interview might serve in any way to advance the prosecution of this application, the undersigned is available at the telephone number noted below.

The Office is authorized to charge any necessary fees to Deposit Account No. 22-0185.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 22-0185, under Order No. 22171-00026-US1 from which the undersigned is authorized to draw.

Dated: May 21, 2008

Respectfully submitted,

Electronic signature: /Myron Keith Wyche/
Myron Keith Wyche
Registration No.: 47,341
CONNOLLY BOVE LODGE & HUTZ LLP
1875 Eye Street, NW
Suite 1100
Washington, DC 20006
(202) 331-7111 (Tel)
(202) 293-6229 (Fax)
Agent for Applicant